I. AMENDMENTS

The following Listing of the Claims supersedes all prior listings, amendments and versions.

Listing of Claims:

Claims 1 - 46 (Cancelled).

47. (Currently Amended) A method for screening a subject ~~cancer cells~~ for sensitivity to a chemotherapeutic drug, comprising:

taking a biological sample of extratumoral, non-metastatic ~~said cancer~~ cells from ~~a~~ said subject; and

determining the genotype of a pre-selected gene of the ~~cancer~~ cells, ~~wherein said genotype determines the intratumoral expression of said gene,~~ and correlating said gene expression to said sensitivity to said chemotherapeutic drug.

48. (Currently Amended) The method of claim 47 wherein said ~~cancer~~ extratumoral cells are ~~colorectal cancer~~ normal cells.

49. (Currently Amended) The method of claim 48 wherein said pre-selected gene is the thymidylate synthase gene.

50. (Previously Presented) The method of claim 49 wherein determining the genotype comprises determining the subject's genotype at a tandemly repeated 28 base pair sequence in the thymidylate synthase (TS) gene's 5' untranslated region (UTR), wherein the genotype is homozygous for a triple repeat of the tandemly repeated sequence, heterozygous for a double repeat and a triple repeat of the tandemly repeated sequence, or homozygous for a double repeat of the tandemly repeated sequence.

51. (Previously Presented) The method of claim 50 wherein the chemotherapeutic drug is a TS directed drug.

52. (Previously Presented) The method of claim 51 wherein the TS directed drug is a fluoropyrimidine.

53. (Previously Presented) The method of claim 52 wherein the fluoropyrimidine is 5-fluorouracil.

54. (Previously Presented) The method of claim 53 wherein the subject is a human subject.

55. (Previously Presented) The method of claim 54 wherein determining the subject's genotype comprises:

determining the genotype at the 5' UTR of the thymidylate synthase gene of said genomic DNA from said cell

56. (Previously Presented) The method of claim 55 wherein said determining the genotype is by analysis of the polymerase chain reaction product of the 5'UTR.

57. (Previously Presented) A kit for use in screening for the effectiveness of TS directed drug therapy in human subjects, the kit comprising: means for determining a genomic polymorphism of the 5 'UTR of the TS gene; and instructions for correlating the genomic polymorphism of the 5' UTR of the TS gene to sensitivity to TS directed drug therapy.

58. (Currently Amended) The kit of claim 57 wherein the means for determining said genomic polymorphism comprises all or some of the positive controls, negative controls, reagents, primers, sequencing markers, and probes for determining the presence or absence of a tandemly repeated 28 base-pair nucleic acid sequence that defines the genomic polymorphism in the 5' UTR of the TS gene.

59. (Previously Presented) The kit of claim 58 wherein the kit components may be provided in solution or as a liquid dispersion.

60. (Previously Presented) The kit of claim 58 comprising DNA tandemly repeated sequences that determine the type of genomic polymorphism of the TS gene in Tris-EDTA buffer solution kept at about 4°C.

61. (New) The method of claim 47 wherein the extratumoral cells are isolated from a body fluid.

62. (New) The method of claim 61 wherein the body fluid is selected from the group consisting of blood and semen.

63. (New) The method of claim 61 wherein the extratumoral cells are peripheral blood cells.

64. (New) The method of claim 61 wherein the extratumoral cells are selected from liver cells, skin cells, blood cells, hair cells and semen cells.

65. (New) The method of claim 61 wherein the cells are live, dead or preserved.

66. (New) The method of any one of claims 61 to 65 wherein the extratumoral cells are normal cells.

67. (New) The method of claim 47 wherein the subject suffers from a cancer selected from the group consisting of colorectal cancer, gastric cancer and liver cancer.